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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/820,254 | 04/08/2004 | Carl Bretmersky | NOR-1164 | 7518 |

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| EXAMINER |
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VY, HUNG T

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| ART UNIT | PAPER NUMBER |
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2821

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,254

Applicant(s)

BRETMERSKY ET AL.

Examiner

Hung T. Vy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


TAN HO
PRIMARY EXAMINER

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is a response to Applicant's amendment filed 12/20/2005, In virtue of this amendment, claims 1-9, and 11-12 remain pending in this application as result of cancellation of claim 10.

Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 7-9 and 11-12 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Pratt et al. (U.S. Patent No. 5,642,268) in view of the Pratt et al. Admitted prior Art (PAPA).

With respect to claims 1, 9 and 11-12, Pratt et al. discloses a method of preventing a high voltage power supply and a radiation generating system for treating a coating on a substrate, comprising: a microwave generator operable to generate microwave radiation (See column 4, line 8-10), it is inherent that Pratt et al. disclose a lamp associated with said microwave generator for receiving microwave radiation therefrom because Pratt et al. disclose the magnetron load (102)(See fig. 3) and microwave generator (See column 4, line 8-10), a high voltage power supply (108)(See column 7, line 18-20) adapted to be connected to an AC voltage source (92) and providing high voltage power to said microwave generator (102), a fault detector (114

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and 116) connected to said high voltage power supply (108) for providing an error signal in response to an excessive current being supplied to said microwave generator (102), and a control (114, 116 and 100) operative to interrupt a connection of AC power to said high voltage power supply in response to said error signal by switching (100)(See fig. 3). Pratt et al. does not disclose a current limiting device connected between said high voltage power supply and said microwave generator. However, PAPA discloses the limiting device (see column 3, line 5-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to arranging a current limiting device between said high voltage power supply and said microwave generator to protect the magnetron when the current go to high since such an arrangement of a limiting device for stated purpose has been well known in the art as evident by the teach of PAPA (see column 3, line 5-10).

With respect to claims 3-5, Pratt et al. discloses the a current sensor (116) and a fault circuit (152) connected to said current sensor and producing said error signal (see column 7, line 25-55), one input connected to said feedback voltage (114), and second input connected to a voltage reference (predetermined level)(See column 7, line 35-37).

With respect to claims 7-8, Pratt et al. discloses high voltage power supply comprises a high voltage transformer (94) having a primary side adapted to be coupled to an AC voltage source (92) and a secondary side providing high voltage power, and a voltage doublers (162) connected to said secondary side of said high voltage

transformer (94), and said fault detector comprises a current sensor (116) and a fault circuit connected to said current sensor and producing said error signal (See fig. 4).

4. Claim 2 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Pratt et al. (U.S. Patent No. 5,642,268) in view of the Pratt et al. Admitted prior Art (PAPA) as applied to claim 1 above, and further in view of Hirosh Ando (JP361032339).

Regarding claim 2, Pratt et al. discloses all the limitation of claimed invention recited in claim 1 except for a current limiting resistance. However, Hirosh Ando discloses a current limiting resistance 11, 12 9 (See fig. 1). It would be obvious to one of ordinary skill in art at the time the invention was made to implement the device of Pratt et al. by adding a current limiting resistance since such having a current limiting resistance in order to protect the device for the stated purpose has been well known in the art as evidenced by the teaching of Hirosh Ando (See fig. 1 and constitution).

5. Claim 6 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Pratt et al. (U.S. Patent No. 5,642,268) in view of the Applicant Admitted prior Art (AAPA) as applied to claim 1 above, and further in view of Nagai et al. (U.S. Patent No. 6,028,415).

Regarding claim 6, Pratt et al. discloses all the limitation of claimed invention recited in claim 3 except for a zener diode. However, Nagai et al. discloses a zener diode (td1)(see fig. 4). It would be obvious to one of ordinary skill in art at the time the invention was made to implement the device of Pratt et al. by arranging a zener diode connects to the comparator in order to generating a detection signal corresponding to the comparison since such arranging a zener diode for the stated

purpose has been well known in the art as evidenced by the teaching of Nagai et al. (See abstract).

Response to Arguments

6. Applicant's arguments, see page 6, filed 12/20/2005, with respect to Smith et al. have been fully considered and are persuasive. The rejection of Smith et al. has been withdrawn. However, Applicant's arguments with respect to Pratt et al. and Pratt et al. Admitted prior Art have been fully considered but they are not persuasive. Applicant made the following arguments:

a. "First, claims 1 and 9 require a current limiting device connected between the high voltage power supply and the microwave generator. As noted in the Office Action, Pratt et al. does not disclose a current limiting device. Further, Kyong-keun describes a SMPS system in which a current feedback from the output of the high voltage power supply is used to control switching of a PWM control 80 and switching means 90. Kyong-Keun does not describe, suggest or motivate one to connect a current limiting device between the high voltage power supply 20, 40, and the magnetron 50 as required by claim 1 and 9" page 8, fourth full paragraph.

b. "Second, claim 1 and 9 require that a control interrupt a connection between an AC power source and the high voltage power supply in response to an error signal representing a supply of an excessive current to the microwave generator. Pratt et al., in Fig. 3, show a switching regulator section 100 that regulates a DC voltage from an AC-DC converter 94 and provides the regulated

DC voltage to a high voltage section 108 of power supply 90 circuit." page 8 second fifth paragraph.

In response to Applicant's argument **a** above, the Applicant's argument is not persuasive because Kyong-keun discloses a SMPS system in which a current feedback is used to control switching of a PWM control 80 and switching means 90 in order to protect the microwave generator over the current. This is a current limiting device. The motivate to connect a current limiting device are protection the magnetron from overcurrent since such arrangement of the current limiting device for that state purpose has been known well in the art as evidenced by Pratt et al. Admitted prior Art (see column 3, line 5-12).

In response to Applicant's argument **b** above, the Applicant's argument is not persuasive because Pratt et al. discloses a control operative to interrupt a connection of AC power to said high voltage power supply in response to said error signal base on the voltage feed back (114) and current feed back (116) (see fig. 3). There is no need to combine Kyong-Keun to provide a control operative to interrupt a connection between the AC input and the rectifier means.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Vy whose telephone number is 571-2721954. The examiner can normally be reached on 8.30am - 5.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571 272 1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hung T. Vy
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January 23, 2006.


TAN HO
PRIMARY EXAMINER